

REMARKS/ARGUMENTS

Claims 1-12 are pending in this application. Claims 1-12 have been rejected. Claims 7, 8 and 12 have been amended for purely formal purposes and not for patentability.

The Office Action requires an update of the status of all parent priority applications. Therefore, Applicant has amended the Cross-Reference to Related Applications to include the application serial numbers.

The Office Action requires a more detailed summary. Applicant respectfully traverses this objection on grounds that 37 C.F.R. §1.73 states that the summary, when set forth. Shall be commensurate with the invention. Because the claims define the invention, the Office Action cannot require more detail in the summary than the claims include.

Rejections under 35 U.S.C. §101

The Office Action has rejected claims 1-6 under 35 U.S.C. §101 on grounds that the claimed invention is allegedly directed to non-statutory subject matter. Applicant respectfully traverses the rejection for the following reasons. Claim 1 and its dependent claims are methods. 35 U.S.C. §101 provides that method or processes are patentable subject matter. The office action contends that claims 1-6 amount to only an abstract idea. To the contrary, the steps recited in the claims provide specific steps carried out with a computer apparatus that satisfy the requirements of 35 U.S.C. §101.

Rejections under 35 U.S.C. §102

The Office Action rejected claim 1 as being anticipated by US Patent No. 6,550,0533 to Muckley (hereafter "Muckley"). Applicant respectfully traverses the rejection of claim 1 and the claims dependent on claim 1 on the following grounds.

Claim 1 recites a method for minimizing total cost of interaction among components of a

computer program, each of said components being characterized by at least one data representation property, said method comprising the steps of:

- a) carrying out at least a partial run of said program;
- b) monitoring said at least partial run of the program to measure an amount of interaction between each pair of components;
- c) determining a cost of interaction between each pair of interacting components;
- d) determining a choice of data representation properties which minimizes total cost of said at least partial run;
- e) assigning said choice of said data representation properties to said components for a subsequent at least partial run of said program.

Applicant respectfully submits that Muckley neither teaches or suggests the invention as claimed. The Office Action cites col. 2, lines 48-50 of Muckley as corresponding to element b). However, neither that section of Muckley nor the rest of the teachings disclose or discuss monitoring said at least partial run of the program to measure an amount of interaction between each pair of components. Col. 2, lines 48-50 of Muckley relate to analyzing a new object-oriented design as part of a method to estimate the time that it would take a designer or group of designers to realize a new design. That has nothing to do with measuring interaction between software components.

The Office Action cites col. 3, line 67- col. 4, line 2 as relating to element c). Applicant respectfully submits that neither the cited portion of Muckley or any other part thereof relates to the subject matter of element c). Rather the quoted "values for the respective multipliers relate to designers or group of designers that are to design an object-oriented design.

The Office Action cites col. 2, lines 24-28 as relating to element d). Applicant respectfully submits that neither the cited portion of Muckley or any other part thereof relates to the subject matter of element d). Rather the cited portion relates to calculation of time that a designer or group of designers would take complete a design and more particularly to applying numbers data (regarding the number of object oriented elements) to a formula. That has nothing to do with a choice of data representation properties as claimed.

The Office Action cites col. 2, lines 24-35 as relating to element e). Applicant

respectfully submits that neither the cited portion of Muckley or any other part thereof relates to the subject matter of element e). Rather the cited portion relates to calculation of time that a designer or group of designers would take complete a design and more particularly to applying numbers data (regarding the number of object oriented elements) to a formula and performing various iterations. That has nothing to do with a assigning a choice of data representation properties to components for a subsequent at least partial run of the program, as claimed.

Claim 7 and its dependent claims are not anticipated by Muckley for at least the same reasons that claim 1 is not. Claims 1-6 depend on claim 1 and for at least the same reasons that claim 1 is not.

Claim 3 is not anticipated by Muckley for the additional reason that the Office Action concedes that Muckley does not disclose the limitation of at least one string being selected from ASCII, UNICODE, and EBCDIC. Anticipation requires that a single reference includes each and every claim limitation. *Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc.*, 726 F.2d 724, 220 USPQ 841 (Fed. Cir, 1984).

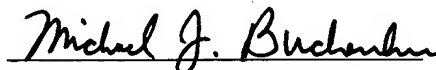
Rejections under 35 U.S.C. §103

Claims 6 and 12 are rejected under 35 U.S.C. §103 as being unpatentable over Muckley in view of US Patent No. 5,598,559 to Chaudhuri. The Office Action concedes that Muckley does not disclose the limitation " wherein the step (d) of determining the choice is carried out by building a graph with nodes representing program components and edges that join adjacent nodes representing interaction therebetween, each edge being characterized by a cost of each interaction, then using a graph cutting technique to find a minimum cut of the graph." However, the Office Action contends that Chaudhi discloses a step of determining the choice carried out by building a graph with nodes representing interaction therebetween ... Applicant respectfully submits that claim 6 is not rendered obvious by the combination of Muckley with Chaudhi because the Office Action has shown no teaching, motivation, or reason for combining the references as suggested by the Office Action. Moreover, as discussed above with respect to the

claims rejected as anticipated, several of the elements of those claims are missing from Muckley. In addition, the Office Action has not shown how the combination of Muckley with Chaudhi teaches or suggests the elements of the independent claims and therefore cannot make a prima facie case of obviousness on any of the pending claims. Chadhuri relates to techniques for optimizing database queries and more particularly to a method and apparatus for optimizing queries by having group-by operators. That has nothing whatsoever to do with the problem of minimizing the number of transformations of data property values and thus those skilled in the art would not look for solutions to such problems in Chadhuri. Similarly, claim 12 is not anticipated or rendered obvious by the combination of Muckley with Chaudhi for the foregoing reasons. For the foregoing reasons. Applicant respectfully requests that the rejection under 35 U.S.C. §103 be withdrawn.

For the foregoing reasons, Applicant respectfully requests allowance of the pending claims and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,


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I hereby certify that this Amendment and Response to Office Action, and any documents referred to as attached therein, are being deposited with the United States Postal Office with sufficient postage as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.


Michael J. Buchenhorner

Date: March 23, 2005

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